

**SUPPLEMENTARY LIST AND INDEX TO AN ANNOTATED LIST  
OF RADIOCARBON DATES FOR SUB-SAHARAN AFRICA**

**J. Deacon  
Albany Museum, Grahamstown**

**INTRODUCTION**

In the paper "An annotated list of radiocarbon dates for sub-Saharan Africa" (10), several dates were inadvertently omitted. The purpose of this supplementary list is to include the omitted dates and to make the lists as complete as available information would allow for dates published up to the end of 1964. An index to both lists is appended.

The structure of this supplementary list is as in the earlier paper except that the relevant references have been grouped together at the end. Since the majority of the dates have had very little information published about their associations and implications of the dating, the additional notes are for the most part brief.

# SUPPLEMENT TO ANNALS OF CAPE PROVINCIAL MUSEUMS VOL. V

## A. GEOLOGICAL AND TREE RING DATES

### b. CENTRAL AFRICA

| Lab. No. | Date $\frac{B.P.}{B.C.}$      | Site                   | Associations | Sample   | Reference |
|----------|-------------------------------|------------------------|--------------|----------|-----------|
| 1. C-697 | $6098 \pm 300$<br>4148 BC     | Lonze Forest<br>Zambia | Unspecified  | Charcoal | 13        |
| 2. C-660 | $3585 \pm 260$<br>1635 BC     | "                      | "            | "        | "         |
| 3. C-661 | av. $3500 \pm 225$<br>1650 BC | "                      | "            | "        | 14        |

### c. EAST AFRICA

|          |                               |                                    |                                                     |           |   |
|----------|-------------------------------|------------------------------------|-----------------------------------------------------|-----------|---|
| 4. A-359 | $17,200 \pm 330$<br>15,250 BC | Dahlaç<br>Archipelago,<br>Ethiopia | Fossil reef dating<br>last uplift of<br>Archipelago | Carbonate | 1 |
|----------|-------------------------------|------------------------------------|-----------------------------------------------------|-----------|---|

### d. WEST AFRICA

|                  |                               |                              |                                           |               |   |
|------------------|-------------------------------|------------------------------|-------------------------------------------|---------------|---|
| 5. Not published | $12,250 \pm 240$<br>10,300 BC | Niger Delta,<br>Nigeria      | Sedimentation of the<br>delta             | Not published | 3 |
| 6. "             | $10,750 \pm 250$<br>8800 BC   | "                            | " " "                                     | " " "         | 3 |
| 7. "             | $3380 \pm 150$<br>1430 BC     | "                            | " " "                                     | " " "         | " |
| 8. "             | $1190 \pm 150$<br>760 AD      | "                            | " " "                                     | " " "         | " |
| 9. NZ-284        | $3885 \pm 125$<br>1935 BC     | "                            | Dead coral banks,<br>depth 312 ft.        | Coral         | 4 |
| 10. NZ-283       | $2920 \pm 100$<br>970 BC      | "                            | Dead coral banks,<br>depth 270 ft.        | "             | " |
| 11. GRO-1194     | $5570 \pm 70$<br>3620 BC      | Takoradi,<br>Ghana           | Dates Second<br>Holocene<br>Transgression | Wood          | 7 |
| 12. T-4013       | $5900 \pm 140$<br>3950 BC     | Bougoudouma,<br>Manga, Niger | Beach at<br>2.50 m.                       | Silt          | 2 |
| 13. T-404        | $5570 \pm 120$<br>3620 BC     | Nouakchott,<br>Mauretania    | Raised beach<br>at + 1m - + 2m.           | Shell         | 3 |
| 14. T-403        | $1910 \pm 100$<br>40 AD       | Fann, Dakar,<br>Senegal      | Raised Beach<br>at + 2m.                  | Shell         | 3 |

## ADDITIONAL NOTES ON GEOLOGICAL DATES

1. **C-697 Lonze Forest, Zambia**6098  $\pm$  300

4148 BC

Charcoal from a depth of 12ft. in the Kalahari Sand in a pit 8ft. in diameter in the Lonze Forest, Barotseland. The sides of the pit were scraped at 12ft. to expose the charcoal. It is not a continuous horizon. The charcoal was found in seven places. Variation in depth between the lowest and highest samples did not exceed 8 ins. Collected by J. Desmond Clark, submitted by H. L. Movius Jr. (13). Details of the implication of this date has not yet been published (see also (10), p. 14).

2. **C-660 Lonze Forest, Zambia**3585  $\pm$  260

1636 BC

Charcoal from a newly developed pit in the Lonze Forest, Barotseland, taken at the 5ft. level (4ft. 10ins. to 5ft. 3ins.). There was no evidence of tree roots and it is believed the charcoal was free from root contamination. Collected by J. Desmond Clark and submitted by H. L. Movius Jr. (13, 10 p. 14).

3. **C-661 Lonze Forest, Zambia**3210  $\pm$  2504300  $\pm$  500average 3500  $\pm$  225

1650 BC

Charcoal from newly developed pit in the Lonze Forest, Barotseland, taken at a depth of 10ft. to 10ft. 4ins. at the site from which Sample C-660 was taken. Collected and submitted as above. (14, 10 p. 14).

4. **A-359 Dahlac Archipelago, Ethiopia**17,200  $\pm$  330

15,250 BC

Carbonate sample from fossil reef ca. 6m. above sea level in the Dahlac Archipelago, east of Massaua, Ethiopia, in the south Red Sea (15° 53' N; 39° 55' E). Collected in 1962 and submitted by Yaacov Nir of Israel Geological Survey, Jerusalem. **Comment:** "Dahlac Archipelago is situated at the western border of the Syrian-African rift system and at the northern edge of the Dankiian Horst. According to Nir, this sample dates the time of the last uplift of the Archipelago and confirms the very recent age of the Dahlac. Sample was washed in dilute HCl before hydrolysis to remove possible recent contamination." (1).

5-8. **Laboratory Numbers not published. Niger Delta Series, Nigeria**

See condensed list.

Samples date the rate of sedimentation in the modern delta of the river Niger in West Africa. Collected by J. R. L. Allen, University of Reading, England (2, 3, 5, 8).

9-10. **Coral Series, Niger Delta, Nigeria**

NZ-284 Depth of 312 ft.

3885  $\pm$  125

1935 BC

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NZ-283 Depth of 270ft.

$2920 \pm 100$   
970 BC

Ahermatypic corals, *Dendrophyllia ramea* and *Madracis asperula* from coral banks on the surface of transgressive Holocene sands. Banks are no longer living and their depth when alive cannot be deduced with certainty. Niger delta. geographical position: 03°57' N: 06°58' E. Collected by J. R. L. Allen, University of Reading, England. **Comment:** "If the banks formed at a level other than the present one, compaction or isostatic or tectonic sinking must have occurred." (2,3,4,5,6).

11. **GRO-1194 Takoradi, Ghana**

$5570 \pm 70$   
3620 BC

Mangrove wood from a fossil forest, exposed below high-water mark, lying on the surface of continental deposits, which were flooded by the second Holocene transgression. This Transgression has recently been recognized at a number of places along the African coast. In the continental deposits, artefacts occurred from the end of the Middle Stone Age. Submitted by O. Davies, University College, Achimota, Ghana (6,7).

12. **T-4013 Bougdouma, Manga, Niger**

$5900 \pm 140$   
3950 BC

Organic material in a silt at a height of 2.50m. (2,3). No other data published.

13. **T-404 Nouakchott, Mauretania**

$5570 \pm 120$   
3620 BC

Shells of *Arca senilis* from a raised beach at a height of plus 1m. to plus 2m. (2,3).

14. **T-403 Fann, Dakar, Senegal**

$1910 \pm 100$   
40 AD

Shells of *Patella safiana* from a raised beach at plus 2m. (2,3).



## DEACON - RADIO CARBON DATES

## B. III. LATER STONE AGE DATES

## a. SOUTH AFRICA

| Lab. No.    | Date $\frac{B.P.}{B.C.}$                   | Site                        | Associations | Sample   | Reference |
|-------------|--------------------------------------------|-----------------------------|--------------|----------|-----------|
| 1. Y-1324   | $\frac{11,250 \pm 200}{10,300 \text{ BC}}$ | Uitkomst Cave,<br>Transvaal | Smithfield   | Charcoal | 9         |
| 2. ?Y-1323A | $\frac{9630 \pm 200}{7680 \text{ BC}}$     | " "                         | "            | "        | "         |

## b. CENTRAL AFRICA

|          |                                        |                    |                    |          |    |
|----------|----------------------------------------|--------------------|--------------------|----------|----|
| 3. LV-46 | $\frac{3080 \pm 170}{1130 \text{ BC}}$ | Mt. Amba,<br>Congo | Clearing of forest | Charcoal | 12 |
|----------|----------------------------------------|--------------------|--------------------|----------|----|

## ADDITIONAL NOTES ON LATER STONE AGE DATES

- |                                    |                  |
|------------------------------------|------------------|
| 1. Y-1324 Uitkomst Cave. Transvaal | $11,250 \pm 200$ |
|                                    | 10,300 BC        |
| 2. ?Y-1323A                        | $9630 \pm 200$   |
|                                    | 7680 BC          |

Charcoal from the Later Stone Age Bed I deposits at Uitkomst Cave, excavated by R. J. Mason. The laboratory number for the younger date has not been published, but the one quoted above is probably correct, since Y-1323B is quoted (9). Y-1323A was collected from an Iron Age furnace in Bed 2, but represents Later Stone Age contamination as the furnace was dug into the Later Stone Age deposit. The Later Stone Age industry is represented by a small sample which has been assigned to the middle stage of the Smithfield Culture in the Transvaal (9.10.11).

- |                          |                |
|--------------------------|----------------|
| 3. Lv-46 Mt. Amba. Congo | $3080 \pm 170$ |
|                          | 1130 BC        |

Charcoal from Mt. Amba, Louvanium Plateau ( $4^{\circ}26' S$ ;  $15^{\circ}18' E$ ), Province of Leopoldville, Congo. From a sterile layer. The same layers of charcoal often occur around Leopoldville, in yellow sand, at a depth of 1m.

**Comment:** "Charcoal is probably a consequence of clearing forest." This date is one of a series of samples related to prehistoric industries in the Leopoldville plain. Collected by H. V. Moorsel, Prehistorical Museum, Louvanium University, Leopoldville, Congo (10,12).

# DEACON - RADIO CARBON DATES

## B. IV. IRON AGE DATES

### b. CENTRAL AFRICA

| Lab. No.  | Date $\frac{\text{B.P.}}{\text{B.C.}}$ | Site                     | Associations                 | Sample     | Reference |
|-----------|----------------------------------------|--------------------------|------------------------------|------------|-----------|
| 1. L-395C | $\frac{1400 \pm 150}{\text{AD } 950}$  | Kalambo Falls,<br>Zambia | Channel-decorated<br>pottery | ? Charcoal | 15        |
| 2. B-233  | $\frac{940 \pm 110}{\text{AD } 1010}$  | Umtali, Rhodesia         | Iron Furnace                 | Charcoal   | 17        |

### d. WEST AFRICA

|           |                                        |                                  |                              |          |    |
|-----------|----------------------------------------|----------------------------------|------------------------------|----------|----|
| 3. Sa-100 | $\frac{3150 \pm 300}{3190 \text{ BC}}$ | Adrar Bous III,<br>Ténéré, Niger | Neolithic                    | Charcoal | 18 |
| 4. Gif-76 | $\frac{3320 \pm 200}{1400 \text{ BC}}$ | Fachi, Ténéré,<br>Niger          | Dwellings covered by<br>dune | Bone     | 3  |
| 5. T-399  | $\frac{340 \pm 110}{1600 \text{ AD}}$  | Sado, Foga,<br>Niger             | Ancient salt works           | Charcoal | 3  |
| 6. T-402  | $\frac{230 \pm 80}{1720 \text{ AD}}$   | Karagou Gamdwa,<br>Manga, Niger  | " " "                        | "        | "  |

## ADDITIONAL NOTES ON IRON AGE DATES

## 1. L-395C Kalambo Falls, Zambia

 $1400 \pm 150$ 

AD 550

Sample of charcoal from 9.5 to 10ft. deep. **Comment** (B. M. F.): "There is every indication that channel-decorated pottery-makers were living at Kalambo Falls for at least a thousand years." (15, 16). This date was originally published without the laboratory number (15).

## 2. B-233 Umtali, Rhodesia

 $940 \pm 110$ 

1010 AD

Charcoal found in a niche below an iron-furnace in a kraal (walled village) of Inyanga culture near Ziwa farm (18° 55' S; 32° 33' E). Collected 1958 by F. O. Bernhard, Umtali, and submitted by H. G. Bandi, Historisches Museum, Bern, Switzerland. **Comment**: "The sample was taken in the deepest culture layer found, accompanied by pottery of a pre-Inyanga culture." (17, 10 p. 65).

## 3. Sa-100 Adrar Bous III, Ténéré, Niger

 $5150 \pm 300$ 

3190 BC

Charcoal from a hearth in a Neolithic deposit at Adrar Bous (20° 20' N; 9° 8' E). Collected 1960 and submitted by H. Hugot, Musée Bardo, Université d'Alger. **Comment**: "Adrar Bous III is a very important Neolithic station (10,000 sq. miles) of Ténéréen culture discovered in 1960 on the bank of a fossil lagoon. Many bones of bovines, hippopotamus and catfish, shells of lake oysters (*Aetheria*) and an industry of beautiful polished axes of green jasper, arrows and tools of quartz, flint and haematite, crushing stones and pottery, show that the culture was based on fishing, hunting and agriculture. Like the similar Es-Shaheinab industry, dated at  $5100 \pm 450$  and  $5450 \pm 380$  (20), it is supposed to be a western extension of the pre-dynastic Egyptian civilization (21, 22). Palynologic study of the diatomite floor of the dry lagoon has shown a mediterranean flora (*Phyllirea*, *Quercus ilex*, *Pistacia lentiscas*, *Alnus glutinosa*, *Cupressus*, *Juniperus*, *Pinus*, *Tilia*, etc.)." (23, 18).

## 4. Gif-76 Fachi, Ténéré, Niger

 $3350 \pm 200$ 

1400 BC

Hippopotamus bones from 30 kms. west of Fachi (2, 3). Dates dwellings above diatomite and covered by modern dune (O. Davies, pers. comm.).

## 5. T-399 Sado, Foga, Niger

 $350 \pm 110$ 

1600 AD

Charcoal from an ancient salt works (2, 3).

## 6. T-402 Karagou Gamdwa, Manga, Niger

 $230 \pm 80$ 

1720 AD

Charcoal from an ancient salt works (2, 3).

## DEACON - RADIO CARBON DATES

## C. DATES OF PALAEOENVIRONMENTAL INTEREST

## c. EAST AFRICA

| Lab. No.    | Date $\frac{\text{B.P.}}{\text{B.C.}}$ | Site                    | Associations                          | Sample                  | Reference |
|-------------|----------------------------------------|-------------------------|---------------------------------------|-------------------------|-----------|
| 1. GrN-3526 | $\frac{7330 \pm 90}{5380 \text{ BC}}$  | Lake Rutundu,<br>Kenya  | Pollen analysis                       | Lake bottom<br>deposits | 24        |
| 2. GrN-3511 | $\frac{6135 \pm 85}{4185 \text{ BC}}$  | " "                     | " "                                   | " "                     | "         |
| 3. GrN-3515 | $\frac{910 \pm 45}{1040 \text{ AD}}$   | Lake Narasha,<br>Kenya  | No great value for<br>pollen analysis | " "                     |           |
| 4. GrN-3517 | $\frac{680 \pm 55}{1270 \text{ AD}}$   | Lake Naivasha,<br>Kenya | " " "                                 | " "                     | "         |
| 5. GrN-3510 | $\frac{380 \pm 60}{1570 \text{ AD}}$   | Yatta Camp,<br>Kenya    | Not specified                         | Hydora<br>rhizomes      | 24        |

## ADDITIONAL NOTES ON DATES OF PALAEOENVIRONMENTAL INTEREST

## 1, 2. Lake Rutundu, Kenya

Bottom deposits from a crater lake on Mt. Kenya, water depth 5.50m. Geographical position  $0^{\circ}02'30''$  S;  $37^{\circ}27'46''$  E; altitude 10,200ft. Submitted by E. M. Van Zinderen Bakker, University of the Orange Free State, South Africa. Core investigated by Miss J. A. Coetzee (24).

|                 |                                    |               |
|-----------------|------------------------------------|---------------|
| <b>GrN-3526</b> | 12.10 - 1240m. below water surface | $7330 \pm 90$ |
|                 |                                    | 5380 BC       |
| <b>GrN-3511</b> | 11.60 - 11.90m. " " "              | $6135 \pm 85$ |
|                 |                                    | 4185 BC       |

## 3. GrN-3515 Lake Narasha, near Timboroa, Kenya

$910 \pm 45$   
1040 AD

Geographical position  $0^{\circ}05'30''$  N;  $35^{\circ}33'$  E. Altitude 9,050ft., near the tree line. Water depth 8m. This lake is apparently very young and therefore not of great value for pollen analysis (24).

|                                                      |              |
|------------------------------------------------------|--------------|
| <b>4. GrN-3517 Lake Naivasha, Rift Valley, Kenya</b> | $680 \pm 55$ |
|                                                      | 1270 AD      |

Bottom deposit of the crater lake on the eastern side of the main lake. Geographical position  $0^{\circ}45'49''$  S;  $36^{\circ}24'36''$  E. Water depth 12m. This core is too young for pollen analysis. The borer could not penetrate deeper (24).

|                                                |              |
|------------------------------------------------|--------------|
| <b>5. GrN-3510 Yatta Camp (near B2), Kenya</b> | $380 \pm 60$ |
|                                                | 1570 AD      |

Hydora rhizomes at geographical position  $1^{\circ}08'53''$  S;  $37^{\circ}43'20''$  E; at an altitude of 3,900ft. Depth 60-74cm. Collected by C. G. Trapnell and R. M. Scott. No details published (24).

CORRIGENDA

The following corrections should be noted for "An annotated list of radio-carbon dates for sub-Saharan Africa", **Ann. Cape Prov. Mus.** V, 5-84.

Page 16, last line: "... at an altitude of 48m. ..." should read "... at an altitude of 4.8m ...).

Page 25 and 28, date no. 8, **Olieboompoort, Transvaal**: the date should read 35,000 years. After publication of the date as 25,000, the laboratory did a re-count. (Mason, **pers. comm.**)

Page 27, line 29: read C-851 and C-852 for C-581 and C-582.

Page 50ff. read Isamu Pati for Isamu Pate (Fagan, **pers. comm.**)

Page 51 and 60: date no. 35, **Ingombe Ilede, Zambia**: R-908 (NZ), date should read  $1270 \pm 40$  (AD 680). This result is a re-count of the same number as the original reading was the result of a fault in the apparatus (Fagan, **pers. comm.**).

Page 43, **Scelerocayre** read **Sclerocarya**

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